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Lind

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[54] WALLBOARD-CUTTING APPARATUS

[72] Inventor: Runar Lind, 199 New Jersey Ave., Bergenfield, N.J. 07621

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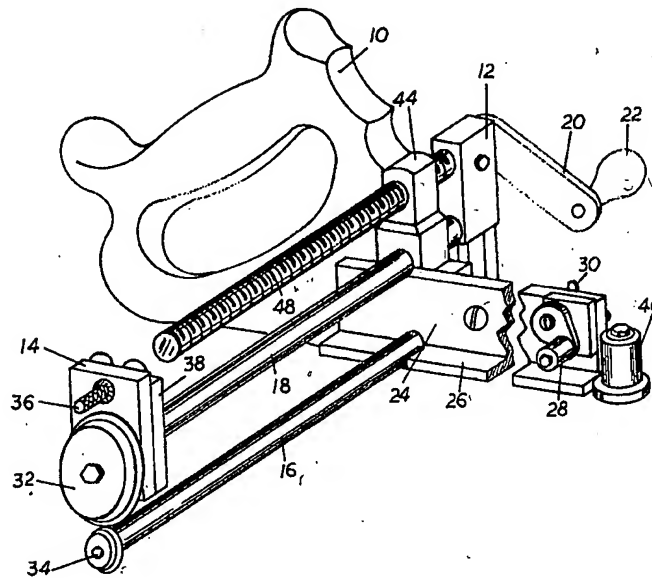
Primary Examiner—Theron E. Condon
Assistant Examiner—J. C. Peters
Attorney—Theodore Jay, Jr.

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ABSTRACT

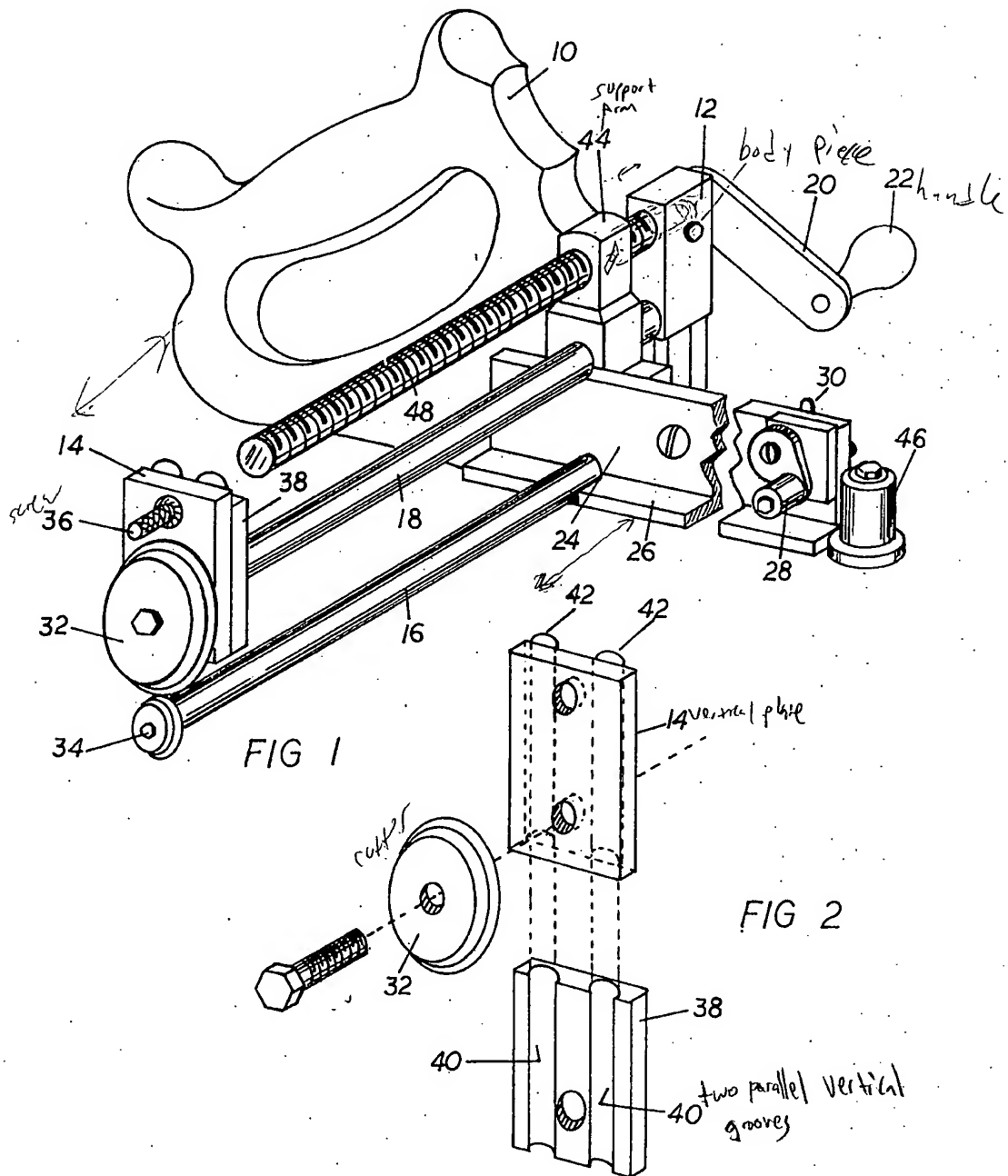
A cutter for wallboard employing two parallel rods with rotary cutters on one set of aligned ends. Means are provided for varying the separation between cutters without varying the spacing between the rods. A support for a wallboard edge can be moved back and forth in the axial direction along the rods to vary the separation between cutters and support as desired.

5 Claims, 2 Drawing Figures



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INVENTOR.

RUNAR LIND

BY

Theodore J. J. J.
ATTORNEY

WALLBOARD-CUTTING APPARATUS

SUMMARY OF THE INVENTION

In order to cut sheets of wallboard to size, it is known to manually score opposite surfaces of the wallboard in exact alignment, cutting through the paper covering each surface, and then to apply pressure manually along the scoring to break off the piece to be cut.

I have devised a new type of wallboard cutter which enables a user to score both surfaces of a sheet of wallboard in exact alignment and at desired position with great ease and accuracy.

To this end, my apparatus comprises first and second parallel horizontal elongated members lying in a common vertical plane and held at one set of corresponding ends. First and second circular or rotary cutters are each connected to an opposite end of a corresponding member and are each freely rotatable in a common vertical plane.

A support for a free edge of a sheet of wallboard extends transversely to the members and is movable back and forth therealong in the axial direction thereof. Means manually operable are provided for moving the support along the members to establish a desired distance between the support and the cutters.

The apparatus is then moved along the sheet to be cut, with the desired edge moving along the support and the sheet passing between the cutters. The cutters then score the opposite surfaces of the sheet and cut the paper thereon whereby both surfaces are scored in exact alignment and in the desired position. The piece to be cut can then be broken off as desired.

Means are provided for varying the separation between the cutters without changing the separation between the members whereby the apparatus can be adjusted to cut sheets differing in thickness.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a perspective view of my invention; and

FIG. 2 is a detail view of a portion of the structure shown in FIG. 1.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to FIGS. 1-2, first and second parallel spaced horizontal rods 18 and 16 are each supported at one end by a vertical support member 12. An elongated horizontal worm 48 parallel to the rods and lying in a common vertical plane therewith has one end rotatably journaled in member 12 whereby elements 22 and 20 form a crank secured to worm 42. and rotation of the crank rotates the worm about its axis.

A member having in cross section the shape of an "L" is provided with joined vertical and horizontal strips 24 and 26 extending at right angles to the rods and is so constructed as to be slidable back and forth therealong in the axial direction.

Strips 24 and 26 are secured to a support 44 to which handle 10 is also secured. Support 44 has bores through which the rods pass freely as well as an additional bore internally threaded and engaged by the worm. Thus, as the worm is rotated, the support is moved back and forth in the axial direction previously described to move the strips accordingly.

The lower rod has a circular cutter 34 secured to the other end and freely rotatable in a vertical plane. The other end of the upper rod is secured to a vertical plate 38 having one surface with two parallel vertical grooves 40. A second vertical plate 14 has parallel vertical tongues 42, each tongue engaging a corresponding groove. A second circular cutter 32 is secured to plate 14 and is freely rotatable thereabout in a common vertical plane with cutter 34. A screw 36, when tightened, locks the plates 14 and 38 together in desired position and, when loosened, enables said plates to be slidable relative to each other. As a result of this sliding action, the

separation between the cutters can be varied without varying the separation between the rods.

A vertical roller 46, freely rotatable about its axis, is secured to the end of the member with its surface flush with strip 26. A horizontal roller 28, freely rotatable about its axis, is secured to vertical plate. This plate is pivotable about a bolt extending through it and strip 26 whereby the separation between roller 28 and strip 26 can be varied as desired. Nut 30 permits the plate to be locked into any desired position.

In use, the worm is rotated until the cutters and member are separated by the desired distance for cutting. The separation between the cutters is set for the thickness of the wallboard to be cut. The separation between roller 28 and strip 26 is adjusted to the same thickness. Then an edge of the wallboard is disposed on strip 26 against strip 24 and the handle is pushed to pass the strips along the board with the rollers substantially eliminating friction. As the board passes between the cutters, both sides of the board are scored and the paper on each side is cut through. The scored portion can then be snapped off the main portion of the wallboard in conventional manner.

What is claimed is:

1. Apparatus for scoring opposite surfaces of a sheet of wallboard, said apparatus comprising:

first and second coplanar parallel elongated members spaced apart from each other;

first means secured to one set of aligned ends of said elongated members;

first and second rotary cutters, said first cutter being connected to the other end of the first elongated member and freely rotatable about the axis thereof, the second cutter being coupled to the other end of the second elongated member and being rotatable about an axis parallel to the axis of the second elongated member;

a support for an edge of said sheet which extends transversely to said elongated members and is movable back and forth axially therealong;

second means for moving said support axially back and forth along said elongated members to a desired position to establish a desired separation between said support and said cutters;

third means for varying the separation between said cutters without altering the separation between said elongated members, said third means including two flat plates disposed between second cutter and the other end of the second elongated member, said plates extending at right angles to the direction of elongation of the second elongated member and being parallel, said third means further including coacting means connecting the two plates to permit relative sliding movement therebetween to vary the separation between the cutters, said coacting means including grooves in one plate extending at right angles to the direction of elongation and tongues on the other plate, each tongue engaging a corresponding groove; and

fourth means for guiding a wallboard edge along said support.

2. Apparatus as set forth in claim 1 wherein said support has first and second strips joined to each other and lying in mutually perpendicular planes, whereby said wallboard edge can be supported upon the first strip, said fourth means including a first roller extending upward at right angles to the first strip and freely rotatable about its axis and a second roller which extends at right angles to the first roller, said second roller being freely rotatable about its axis and spaced from the first strip and the first roller.

3. Apparatus as set forth in claim 2 wherein said fourth means includes additional means for varying the separation between the second roller and the first strip.

4. Apparatus as set forth in claim 3 wherein said support has a threaded bore extending therethrough parallel to said elongated members and said second means includes an elongated worm passing through and threadedly engaging the bore.

5. Apparatus as set forth in claim 4 wherein said second means includes a crank for rotating said worm about its axis.

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